

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-011323**Date Inspected:** 13-Dec-2009**Project Name:** SAS Superstructure**OSM Arrival Time:** 1900**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 700**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** See Below**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG**Summary of Items Observed:**

CWI Inspectors: Mr. Ye Yong Mi, Mr. Liu Fa Wen

On this date CALTRANS OSM Quality Assurance (QA) Inspector, Mr. Paul Dawson, arrived on site at the Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai, China, for the purpose of monitoring welding and fabrication of the San Francisco / Oakland Bay Bridge (SFOBB) components. This QA Inspector observed the following:

**OBG BAY 5**

This QA Inspector observed ZPMC welder Mr. Wang Guilin, stencil 067275, is using flux cored welding procedure WPS-B-T-2132 to make traveler rail weld 11TR5-002-014. This QA Inspector observed a welding current of approximately 320 amps 31.3 volts and Mr. Wang Guilin appears to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Chen Jai Jun, stencil 205390, is using flux cored welding procedure WPS-B-T-2132 to make traveler rail weld 11TR9-001-009. This QA Inspector observed a welding current of approximately 300 amps and 31.3 volts and Mr. Chen Jai Jun appears to be certified to make this weld. QC Inspector Mr. Xin Wan has recorded a welding current of 315 amps and 31.2 volts. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Liu Qing Tian, stencil 066359, is using flux cored welding

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procedure WPS-B-T-2132 to make traveler rail weld 10TR4-004-010. This QA Inspector observed a welding current of approximately 300 amps and 35.0 volts. This QA Inspector asked ZPMC QC Inspector Mr. Xin Wan if this welding voltage is acceptable and Mr. Xin Wan informed this QA inspector that the welding voltage is too high and he reduced the welding voltage to 30.5 volts. Following adjustment of the welding voltage this QA Inspector measured a welding current of approximately 300 amps and 30.6 volts. Items observed on this date do not appear to fully comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Chen Jai Jun, stencil 205390, is using flux cored welding procedure WPS-B-T-2132 to make traveler rail weld 11TR9-001-009. This QA Inspector observed a welding current of approximately 315 amps 31.2 volts and Mr. Chen Jai Jun appears to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Wen Yan Yan, stencil 066734, is using flux cored welding procedure WPS-B-T-2232-TC-U4C-F to make cantilever beam groove weld BK001-032-004. This QA Inspector observed Mr. Wen Yan Yan appears to be certified to make this weld and QC has recorded a welding current of 315 amps 31.3 volts. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Wang Youxiang, stencil 066912 is using flux cored welding procedure WPS-B-T-2232-TC-U4C-F to make cantilever beam groove weld BK001-034-003. This QA Inspector observed Mr. Wang Youxiang appears to be certified to make this weld and QC has recorded a welding current of 310 amps 31.3 volts. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Ms. Ban Qiuyun, stencil 025353 is using flux cored welding procedure WPS-345-FAW-3F(3F)-Repair to make cantilever beam groove weld in the 3G position in accordance with RFI 01933 which changes the weld groove from a complete joint penetration weld to a partial penetration weld as a result of the weld joint having a noncontinuous backing bar. This QA Inspector observed Ms. Ban Qiuyun appears to be certified to make this weld and a welding current of approximately 230 amps 26.0 volts. Items observed on this date appeared to generally comply with applicable contract documents.

### ZPMC Heavy Dock

This QA Inspector observed ZPMC welder Mr. Wang Gungzhi, stencil 050041 is using flux cored welding procedure WPS-B-T-2232-TC-P5-F to make north tower lift 1 stiffener weld NSD1-A112 B/H-114. This QA Inspector measured a welding current of approximately 320 amps and 30.1 volts and the base material has been preheated with electric heaters and ZPMC QC Inspector Mr. Xin Wan is monitoring this welding. This QA Inspector observed that Mr. Wang Gungzhi appears to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

### Summary of Conversations:

See Above.

### Comments

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This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang phone: 150-0042-2372 , who represents the Office of Structural Materials for your project.

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| <b>Inspected By:</b> | Dawson,Paul    | Quality Assurance Inspector |
| <b>Reviewed By:</b>  | Carreon,Albert | QA Reviewer                 |

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